

goal, the proportion of and time to A1C increasing above 7% (relapse) were analyzed. Cox proportional hazard models were estimated to identify demographic and clinical predictors of A1C goal achievement and relapse. **RESULTS:** Basal insulin initiators with T2DM ($n=13,373$) were on average 60 years old, 50.5% were females, 59.5% had A1C $>8\%$, 59.7% were obese, and more than half used metformin (52.7%) or sulfonylureas (53.4%) before insulin initiation. A total of 5844 (44%) patients reached goal within one year since initiation, and 7699 (58%) reached goal during the ~2.5-year follow-up. The median time to reaching goal was 536 days (95% CI: 510-562). Older age, being white or male, lower baseline A1C values and no OAD use before insulin initiation were associated with significantly higher rates of reaching goal. Among the patients who reached goal, 57.6% relapsed, and the median time from reaching the goal to relapse was 398 days (95% CI: 383-417). Being Hispanic, higher baseline A1C values and OAD use at baseline were associated with significantly higher rates of relapse. **CONCLUSIONS:** A high proportion of T2DM patients did not have adequate glycemic control after initiating basal insulin. Various factors existing prior to insulin initiation were related to successful treatment of T2DM. Further research into how to improve glycemic control is encouraged.

PDB67

TREATMENT PATTERNS AND HEALTH OUTCOMES AMONG TYPE 2 DIABETES WITH COMORBID OBESITY IN FRANCE, GERMANY, AND UK

DiBona Ventura MD¹, Isherwood G², Le Pautremat V³, Eschwege E⁴
¹Kantar Health, New York, NY, USA, ²Kantar Health, Epsom, Surrey, UK, ³Kantar Health, Montrouge, France, ⁴INSERM, Villejuif, France

OBJECTIVES: The aim of the current study was to examine patient characteristics, treatment patterns, and burden of type 2 diabetes (T2D) adult patients with and without comorbid obesity in France, Germany, and UK. **METHODS:** Data from the EU National Health and Wellness Survey were used. Demographics, HbA1c levels, prevalence of hypertension, high cholesterol, T2D current treatments, and health outcomes (SF-12) were assessed for all T2D patients (France: $n=642$, Germany: $n=1,019$, UK: $n=932$). Patients with and without obesity (BMI ≥ 30) were also compared. **RESULTS:** Obesity rates within T2D were 47%, 51%, and 56% in France, Germany, and UK, respectively. Pooling countries, T2D patients had 2.6 greater odds of obesity than non-T2D patients and the proportion of obese T2D patients increased from 44% to 51% (2006 to 2010). The rates of being uncontrolled (HbA1c $\geq 7\%$) were higher among obese T2D (20% vs. 17%, $p<.05$), but the difference was only significant in Germany (24% vs. 19%, $p<.05$). The use of insulin was significantly higher (23% vs. 16%, $p<.05$) among obese patients, but this difference was only significant in Germany and UK and not in France. Hypertension and high cholesterol were significantly more prevalent in obese T2D patients (65% vs. 51% and 40% vs. 35%, respectively, $ps<.05$). Hypertension differences were significant for all countries while high cholesterol differences were only significant in Germany. Obesity was associated with significantly worse physical quality of life (France: 40 vs. 44; Germany: 39 vs. 44; UK: 37 vs. 42, respectively $p<.05$). **CONCLUSIONS:** A substantial number of T2D patients are obese. Obesity was associated with worse quality of life, and worse health outcomes including poor glycemic control (in the case of Germany), hypertension and high cholesterol; all these factors are CV disease risk factors. Improving obesity management will be the key to improve health and outcomes in T2D.

PDB68

THE IMPACT OF IMPLEMENTING A DRUG PREAUTHORIZATION POLICY IN A PRIMARY CARE SETTING

Triki N¹, Shani S¹, Mossinson D², Greenberg D¹
¹Ben-Gurion University of the Negev, Beer-Sheva, Israel, ²Maccabi Healthcare services, Tel Aviv, Israel

OBJECTIVES: We analyzed the impact of implementing a preauthorization policy for Rosiglitazone (an anti-diabetic drug) use on the eligibility requirements (treatment initiation and discontinuation) and patients' HbA1c levels. **METHODS:** We compared treatment patterns of diabetic patients prior to and after an implementation of a preauthorization policy for Rosiglitazone use. Data were obtained from the Maccabi Healthcare Services' (the second largest HMO in Israel) registry of diabetic patients. We compared adherence to eligibility criteria in a group of patients who received Rosiglitazone without preauthorization ($N=1362$) and patients who received the medication with preauthorization ($N=824$). The criteria for receiving Rosiglitazone in both groups were identical and included prior medication [experienced patients who received drug from the sulphonylurea class in combination with Metformin for at least a three months period], and laboratory criterion [HbA1c levels higher than 8% during the past three months]. Treatment should be continued only if within three months from treatment initiation, the patient acquired at least three packages of Rosiglitazone and a decrease of $>0.8\%$ in HbA1c values was observed. **RESULTS:** Implementing preauthorization policy increased the fulfillment of the eligibility criteria (medication and laboratory) for drug use by 41% [from 25% of patients without preauthorization to 35% with preauthorization ($p<0.001$)]. With regard to meeting the requirements for treatment continuation after a three month period, there was an increase of only 6.4% in the fulfillment of both requirements (from 37.6% to 40.0% prior and after preauthorization, respectively). The average decrease in patients' HbA1c levels was 0.6% and was similar in both patients with and without preauthorization. **CONCLUSIONS:** Implementing preauthorization for Rosiglitazone resulted in an increase in meeting the requirements for treatment initiation and a marginal change in treatment continuation criteria, but this increase was insufficient to achieve HbA1c target levels. However, patients' health was not negatively affected by this policy.

PDB69

PRESCRIPTION PATTERN STUDY OF TYPE 2 DIABETES MELLITUS IN IRAN

Soleymani F¹, Farshchi A¹, Haerizadeh M²

¹Tehran University of Medical Sciences, Tehran, Iran, ²Ministry of Health, Tehran, Iran

OBJECTIVES: Type 2 diabetes, is a disease with a rising prevalence worldwide. A major burden of this disease would be shared by developing countries like Iran. Medications for diabetes mellitus need to be taken for the entire life and factors like efficacy, side effects, drug interactions and cost of therapy should be considered. This study was designed to evaluate the prescription pattern of anti-diabetic drugs in T2DM patients from 2006 to 2009 in Iran. **METHODS:** A retrospective study was undertaken on insured prescriptions during 4 years. All insured prescriptions which were collected in special software called Rx Analyst during the study period in the NCRUD were reviewed for prescriptions included anti-diabetic drugs. The brand names of drugs in prescriptions were decoded to generic names, according to standard Iran drug list. **RESULTS:** A total of 261,110,666 prescriptions were assessed in which 11,637,224 were detected to be included at least one dosage form of anti-diabetic medications. From all, 1,376,750 prescriptions had at least one injection form of insulin and 10,260,474 of oral anti-diabetic drugs. Trend evaluation of prescribing showed that the total number anti-diabetic medications were increased from 16,158,375 in 2006 to 4,268,444 in 2009. The portion of prescriptions with Insulin was 8%, 9%, 13% and 9% and for oral anti-diabetic drugs, it was 59%, 66%, 71% and 72% in 2006, 2007, 2008 and 2009, respectively. The total cost of Insulin during study period was 17,134,032 US\$ and for oral anti-diabetic drugs was 84,682,039 US\$ from national sales data. **CONCLUSIONS:** According to national sales data, total cost of anti-diabetic medications is about 100,000 times more than cost of these drugs in prescriptions. This huge gap shows irrational use of such medications. A multi-interventional policy including educational, regulatory, managerial and financial strategies for professions and public should be planned to promote rational use of anti-diabetic medications.

PDB70

LOW-DOSE PIOGLITAZONE UTILISATION IN PATIENTS WITH TYPE 2 DIABETES MELLITUS IN THE UNITED KINGDOM

Zhao C, Zhang Q, Davies MJ, Steinberg H
 Merck Sharp & Dohme Corp., Whitehouse Station, NJ, USA

OBJECTIVES: To evaluate the distribution of pioglitazone (PIO) daily dose prescribed by physicians for patients with type 2 diabetes mellitus (T2DM). **METHODS:** In a retrospective cohort study using the UK MediPlus database, patients with diagnosed T2DM who received PIO prescription between July 2008–June 2009 (observation period) were included. Medical records from 07/2007–06/2008 were used to assess baseline conditions. Patients were grouped, according to prescriptions in the observation period, as low-dose users who received PIO prescriptions of 15-mg daily dose only or were down-titrated to 15 mg from a higher daily dose, and high-dose users for the rest who received a 30 mg or higher daily dose. **RESULTS:** Of 1813 patients with T2DM who received a PIO prescription, 48% received at least one 15 mg prescription during the observation period. Among all PIO prescriptions, 39%, 40%, and 21% were in 15, 30, and 45 mg or higher daily dose, respectively. Per study definitions 38% of the patients were classified as low-dose users and 62% as high-dose users. Low-dose users were more likely to be female (56% vs. 40%) and had a lower baseline prevalence of diabetic nephropathy (0% vs. 1%), compared to high-dose users ($p<0.05$). Low-dose PIO use was not associated with baseline prevalence of congestive heart failure, coronary artery disease, or bone fractures. **CONCLUSIONS:** Low-dose PIO was prescribed in greater than one-third of PIO prescriptions, regardless of patient age and major comorbidities. The reason(s) why patients received low-dose PIO warrants further investigation.

PDB71

CROSS-SECTIONAL ANALYSIS OF AMBULATORY CARE EXPENDITURE AMONG PATIENTS WITH TYPE 2 DIABETES MELLITUS (T2DM) ACCORDING TO TREATMENT STAGE AND RENAL FUNCTION IN FRANCE USING EGB DATABASE (ECHANTILLON GENERALISTE DE BENEFICIAIRES)

Gueffucci F¹, Clay E¹, Aballea S², Toumi M³, Lassalle R⁴

¹Creativ Research, Paris, France, ²Creativ Ceutical, Paris, Ile de France, France, ³University Claude Bernard Lyon 1, Lyon, France, ⁴Université de Bordeaux, Bordeaux, France

OBJECTIVES: This retrospective study compares annual expenditures among T2DM patients according to treatment stage and renal function status (RFS) and identifies determinants of costs. **METHODS:** T2DM patients' records were extracted from the EGB database, which contains ambulatory care claims for a representative sample of the French population. Patients were classified according to treatment stage: oral / GLP1 monotherapy, double therapy, triple therapy or insulin therapy (either associated or not with other antidiabetics), and according to RFS (identified using pharmacy, lab and consultation claims). Costs were estimated from the national insurance perspective and included all reimbursements except for hospitalizations. Annual expenditures were assessed by year (from 2005 to 2010), by treatment stage and by RFS. Effects of treatment stages and RFS on expenditures by year were analysed by means of generalised linear models, with matching on age and gender. **RESULTS:** The number of patients ranged from 9,682 to 11,772 between 2005 and 2010. Annual average total reimbursements in 2010 were €3,279 (standard error: 65.5) for monotherapy, €3,592 \pm 92.1 for double therapy, €3,803 \pm 157.2 for triple therapy and €7,729 \pm 180.8 for insulin therapy. The same cost pattern was found in previous years. The regression model showed that costs increased by a ratio of 2.31 ($p<0.001$) from monotherapy to insulin therapy, adjusted for socio-demographic characteristics and co-treatments. Excess costs for insulin therapy were mainly related to nursing care (increasing by a ratio of 12.16, $p<0.001$), med-